

I claim:

1. A ballistic panel for being incorporated into a lightweight soft body-armor product adapted for covering an area of the body, said ballistic panel comprising an assembly of woven fabric plies with warp and fill yarns comprising bundled Poly (p-phenylene-2, 6-benzobisoxazole) fibers, said fibers being stretched at a draw ratio higher than 1:1 to promote dissipation of moisture, and said plies having a collective areal density of no greater than 1.0 pounds per square foot, and a V50 ballistic limit of no less than 1925 feet per second using a .22 caliber, 17 grain FSP at 0 degrees obliquity.
2. A ballistic panel according to claim 1, wherein said warp yarns weigh approximately 500 denier.
3. A ballistic panel according to claim 1, wherein said fill yarns weigh approximately 500 denier.
4. A ballistic panel according to claim 1, wherein each of said woven fabric plies comprises between 25 and 45 ends of warp yarn per inch.

5. A ballistic panel according to claim 1, wherein each of said woven fabric plies comprises between 25 and 45 ends of fill yarn per inch.

6. A ballistic panel according to claim 1, wherein said woven fabric plies are formed using a plain weave.

7. A ballistic panel according to claim 1, wherein said assembly comprises between 25 and 40 overlapping fabric plies.

8. A ballistic panel according to claim 1, wherein the tensile modulus of the warp and fill yarns is greater than 1500 grams / denier.

9. A ballistic panel according to claim 1, wherein the tensile strength of the warp and fill yarns is greater than 40 grams / denier.

10. A ballistic panel for being incorporated into a lightweight soft body-armor product adapted for covering an area of the body, said ballistic panel comprising an assembly of overlapping plain-weave fabric plies with warp and fill yarns comprising bundled Poly (p-

p-phenylene-2, 6-benzobisoxazole) fibers, said fibers being stretched at a draw ratio higher than 1:1 to promote dissipation of moisture, and said warp and fill yarns each weighing approximately 500 denier, and said plies having a collective areal density of no greater than 1.0 pounds per square foot, and a V50 ballistic limit of no less than 1925 feet per second using a .22 caliber, 17 grain FSP at 0 degrees obliquity.

11. A lightweight soft body-armor product adapted for covering an area of the body, said body-armor product comprising at least one ballistic panel including of an assembly of woven fabric plies with warp and fill yarns comprising bundled Poly (p-phenylene-2, 6-benzobisoxazole) fibers, said fibers being stretched at a draw ratio higher than 1:1 to promote dissipation of moisture, and said plies having a collective areal density of no greater than 1.0 pounds per square foot, and a V50 ballistic limit of no less than 1925 feet per second using a .22 caliber, 17 grain FSP at 0 degrees obliquity.

12. A body-armor product according to claim 11, wherein said body-armor product comprises a ballistic flak vest.

13. A body-armor product according to claim 11, overall weight of ballistic flak vest is less than 7.0 pounds.

14. A body-armor product according to claim 11, wherein said warp yarns weigh approximately 500 denier.

15. A body-armor product according to claim 11, wherein said fill yarns weigh approximately 500 denier.

16. A body-armor product according to claim 11, wherein each of said woven fabric plies comprises between 25 and 45 ends of warp yarn per inch.

17. A body-armor product according to claim 11, wherein each of said woven fabric plies comprises between 25 and 45 ends of fill yarn per inch.

18. A body-armor product according to claim 11, wherein said fabric plies are formed using a plain weave.

19. A body-armor product according to claim 11, wherein said ballistic panel comprises between 25 and 40 overlapping fabric plies.

20. A body-armor product according to claim 11, wherein the tensile modulus of the warp and fill yarns is greater than 1500 grams / denier.